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(54) **Permanent waving emulsion with mercaptosilicones, and process for using it**

(57) A process for permanent waving of hair by a reaction in which cystine bridges are reduced to cysteine, the hair reshaped, and the reaction reversed. The advantage of our process resides in the step of reducing or reversing the reaction by applying to hair a composition which includes an emulsion polymerized mercapto-functional silicone. Permanent hair waving with waving lotions, neutralizing solutions, or both, containing such emulsion polymerized mercapto-functional silicones, provide waved hair with enhanced conditioning benefits.

EP 0 829 257 A3



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EUROPEAN SEARCH REPORT

Application Number
EP 97 11 5145

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	EP 0 582 152 A (MITSUBISHI PETROCHEMICAL CO) 9 February 1994 (1994-02-09) * page 7, line 25-29; claim 1; example 12 *	1-7, 10, 11	A61K7/09
D, X	EP 0 295 780 A (DOW CORNING) 21 December 1988 (1988-12-21) * claims 1, 2 *	1-7, 10, 11	
X	WO 95 03776 A (MINNESOTA MINING & MFG) 9 February 1995 (1995-02-09) * page 45, line 13-36; claims 1, 11-13 *	1-6, 11	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			A61K
Place of search		Date of completion of the search	Examiner
BERLIN		3 February 2000	Beys, E
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 97 11 5145

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03-02-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0582152 A	09-02-1994	JP 6092825 A	05-04-1994
		KR 9701208 B	04-02-1997
		US 5362485 A	08-11-1994
EP 0295780 A	21-12-1988	AU 596747 B	10-05-1990
		AU 1756188 A	15-12-1988
		JP 63318903 A	27-12-1988
WO 9503776 A	09-02-1995	US 5468477 A	21-11-1995
		EP 0714275 A	05-06-1996
		JP 10512233 T	24-11-1998
		US 5725882 A	10-03-1998